

MX3-CE Installation and Operator's Guide



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E-EQ-MX3CEOGWW-A-ARC



**This document was changed from it's original paper published
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The technical content was not revised/updated between Revision A and Revision B.**

REGULATORY NOTICES

LANGUAGE : ENGLISH

Notice:

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FCC Information:

This device complies with FCC Rules, part 15. Operation is subject to the following conditions:

1. This device may not cause harmful interference
and
2. This device must accept any interference that may be received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning: Changes or modifications to this device not expressly approved by LXE, Inc., could void the user's authority to operate this equipment.

EMC Directive Requirements:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Industry Canada:

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouiller du Canada. Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe A prescrites dans le Règlement sur le brouillage radioélectrique édictés par le ministère des Communications du Canada.

Notice:

The long term characteristics or the possible physiological effects of radio frequency electromagnetic fields have not been investigated by UL.

Li-Ion Battery

When disposing of the MX3-CE Main Battery, the following precautions should be observed: The battery should be disposed of promptly. The battery should not be disassembled or crushed. The battery should not be heated above 212°F (100°C) or incinerated.

RF Safety Notice:

Caution



This device is intended to transmit RF energy. In accordance with FCC and Industry Canada radio-frequency safety regulations, when operating this device with the Hip-Flip accessory, it should be used in accordance with the user's instructions. Additionally, the user should take care to ensure that a minimum separation distance of 20cm (7.8 in.) is maintained from the antenna to nearby persons. Use of this device in a manner not consistent with these instructions can increase the risk of RF exposure.

R&TTE Directive Requirements



Information to User

A label on the exterior of the device should resemble one of the labels shown below (the label contains the LXE part number of the installed radio card). The labels shown below and affixed to the device, identify where the device may be used and where its use is restricted. Use of a device is prohibited in countries not listed below or otherwise identified by the label.



Permitted for use in: Austria, Belgium, Denmark, Finland, Germany, Greece, Iceland, Italy, Ireland, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom



Permitted for use in France.

MX3-CE Computer Approvals:

Product	EMI / EMC Standards	Transceiver	Safety Standards
MX3-CE	FCC Part 15 Subpart B, Class A EN 55022:1998, (CISPR 22:1997) Class A EN 55024:1998 Industry Canada Class A	ETSI 300 328 IC-RSS 210 IC-RSS 139	UL 1950; CSA C22.2 No. 950 CDRH: 21 CFR 1040.10 and 1040.11 EN 60950 IEC 60825-1 IEC 950

Cradle Approvals:

Product	EMI / EMC Standards	Safety Standards
MX3-CE Table MX3-CE Vehicle Mount	FCC Part 15 Subpart B, Class A EN 55022:1998, (CISPR 22:1997) Class A EN 55024:1998 Industry Canada Class A	UL 1950; CSA C22.2 No. 950 EN 60950 IEC 950

Transceiver

Transceiver	RF Standards	Notes
480824-3300 (LXE Part No.) LXE 6400 System 2.4GHz Type II PCMCIA Card	FCC Part 15, Subpart C FCC Part 2 ETS 300 328 ETS 300 826 IC-RSS 210 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
480628-4096 (LXE Part No.) LXE 6500 System 2.4GHz Type II PCMCIA Card	FCC Part 15, Subpart C FCC Part 2 ETS 300 328 ETS 300 826 IC-RSS 139 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use

LXE Transceiver 480824-3300 Declaration of Conformity



DECLARATION OF CONFORMITY according to Directives:

1999/5/EC **Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity**

93/68/EEC **CE Marking Directive**

Type of Equipment: Frequency Hopping 2.4 GHz Wireless LAN Card
Brand Name or Trademark: LXE
Type Designation: 480824-3300
Manufacturer: LXE Inc.
Address: 125 Technology Parkway
Norcross, GA 30092-2993 USA
Year of Manufacturer: 2000

The following harmonized European Standards, technical specifications, or other normative documents have been applied:

EMI / EMC Standards:

EN 55022 : 1995 Limits and methods of measurement of radio disturbance characteristics of information technology equipment
ETS 300 826 : 1997 Electromagnetic compatibility - Generic immunity standard, Part 1: Residential, commercial and light industrial
EN 61000-4-2 : 1995 Electrostatic discharge immunity test
EN 61000-4-3 : 1997 Radiated radio frequency electromagnetic field immunity test
EN 61000-4-6 : 1996 RF conducted immunity test

Radio Frequency Standards:

ETS 300 328 : 1996 Radio Equipment and Systems (RES);
Wideband transmission systems;
Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques

Safety Standards:

IEC 950-2: 1991 Safety of information technology equipment, including electrical business equipment
+ Amendments
A1..A4

We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.

Place: LXE Inc., Norcross GA USA

Signed: 

R. Sam Wismer,
Lead Approvals Engineer

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224 fax 770/447-6928

LXE Transceiver 480628-4096 Declaration of Conformity



DECLARATION OF CONFORMITY according to Directives:

1999/5/EC **Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity**

93/68/EEC **CE Marking Directive**

Type of Equipment: Direct Sequence 2.4 GHz Wireless LAN Card
Brand Name or Trademark: LXE
Type Designation: 480628-4096
Manufacturer: LXE Inc.
Address: 125 Technology Parkway
Norcross, GA 30092-2993 USA
Year of Manufacturer: 2000

The following harmonized European Standards, technical specifications, or other normative documents have been applied:

EMI / EMC Standards:

EN 55022 : 1995 Limits and methods of measurement of radio disturbance characteristics of information technology equipment
ETS 300 826 : 1997 Electromagnetic compatibility - Generic immunity standard, Part 1: Residential, commercial and light industrial
EN 61000-4-2 : 1995 Electrostatic discharge immunity test
EN 61000-4-3 : 1997 Radiated radio frequency electromagnetic field immunity test
EN 61000-4-6 : 1996 RF conducted immunity test

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Wideband transmission systems;
Technical characteristics and test conditions for data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques

Safety Standards:

IEC 950-2: 1991
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A1..A4 Safety of information technology equipment, including electrical business equipment

We, LXE Inc., declare that the equipment specified above complies with all Essential Health and Safety Requirements of the above Directives and Standards, as amended.

Place: LXE Inc., Norcross GA USA

Signed:

Date of issue: 1 March, 2000

R. Sam Wismer,
Lead Approvals Engineer

LXE Inc. 125 Technology Parkway Norcross, GA 30092-2993 USA
ph. 770/447-4224 fax 770/447-6928



Lithium Battery Safety Statement



Caution:

Lithium battery inside. Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by battery manufacturer. (US)

Attention:

Contient une pile de lithium. Risque d'explosion dans le cas où la pile ne serait pas correctement remplacée. Remplacer uniquement avec une pile semblable ou équivalente au type de pile recommandé par le fabricant. (FR)

Forsigtig:

Indeholder lithiumbatterier. Risiko for eksplosion, hvis batteriet udskiftes forkert. Må kun udskiftes med samme eller tilsvarende type, som anbefalet af fabrikanten. (DK)

Varoitus:

Tämä tuote käyttää laservaloa. Skannerissa on jokin seuraavista tarroista. Lue Huomio-kohta. (FI)

Vorsicht:

Enthält Lithium-Batterie. Bei unsachgemäßem Ersatz besteht Explosionsgefahr. Nur durch gleichen oder vom Hersteller empfohlenen Typ ersetzen. (DE)

Attenzione:

Batteria al litio. Pericolo di esplosione qualora la batteria venga sostituita in maniera scorretta. Sostituire solo con lo stesso tipo o equivalente consigliato per il fabbricante. (IT)

Atenção:

Contém pilha de lítio. Há perigo de explosão no caso de uma substituição incorreta. Substitua somente pelo mesmo tipo, ou equivalente, recomendado pelo fabricante. (PT)

Varning:

Innehåller litiumbatteri. Fara för explosion om batteriet är felaktigt placerat eller av fel typ. Använd endast samma eller motsvarande typ batterier rekommenderade av tillverkaren. (SE)

Advarsel:

Innmontert Lithium batteri. Eksplosjonsfare ved feil montering av batteri. Benytt kun batteri anbefalt av produsent. (NO)

Cuidado:

Pila de litio adentro. Peligro de explosión si la pila se reemplaza incorrectamente. Reemplace solamente con el mismo tipo o equivalente recomendado por el fabricante. (ES)

Oppassen:

Bevat Lithium-batterij. Incorrrecte plaatsing van batterij kan leiden tot explosiegevaar. Alleen vervangen door hetzelfde of door fabrikant aanbevolen gelijkwaardig type. (NL)



Lithium Battery Safety Statement



<p>Προσοχή: Υπάρχει μπαταρία από λίθιο εσωτερικά. Υπάρχει κίνδυνος έκρηξης εάν η μπαταρία αντικατασταθεί με λανθασμένο τρόπο. Αντικαταστήστε μόνο με τον ίδιο ή ισοδύναμο τύπο που συνιστάται από τον κατασκευαστή. (GR)</p>	<p>주의: 리튬 배터리 내부. 배터리가 잘못 설치되었을 경우 폭발의 위험이 있습니다. 동일한 배터리, 또는 배터리 제조업체가 권장하는 배터리로 교체하십시오. (KR)</p>
<p>注意: リチウム電池が入っています。間違った種類の電池を使用すると、破裂する恐れがあります。同じ電池、または電池製造元が推奨する同等の電池を使用してください。 (JP)</p>	<p>小心: 内装锂电池。如电池更换不当，则有发生爆炸的危险。只能用电池制造商推荐的相同或同等电池进行更换。 (CN)</p>
<p>Dikkat: İçinde lityum bataryası bulunur. Bataryanın yanlış değiştirilmesi patlama tehlikesi yaratır. Aynısıyla veya üreticinin önerdiği eşdeğer tipte değiştirin. (TR)</p>	

Legend:

Chinese	CN	Italian	IT
Danish	DK	Japanese	JP
Dutch	NL	Korean	KR
English	US	Norwegian	NO
Finnish	FI	Portuguese	PT
French	FR	Spanish	ES
German	DE	Swedish	SE
Greek	GR	Turkish	TR



Laser Light Safety Statement



Warning:

This product uses laser light. One of the following labels is provided on the scanner. Please read the Caution statement. (US)

Mise en garde:

Ce produit utilise un rayon laser. L'une des étiquettes suivantes est apposée sur le scanner. Veuillez lire l'avertissement qu'elle contient. (FR)

Advertência:

Este produto usa luz de laser. O scanner contém um dos seguintes avisos. Favor ler o Aviso. (PT)

Varning:

Denna produkt använder laserljus. En av de nedanstående etiketterna sitter på scannern. Var god läs varningstexten. (SE)

Advarsel:

Dette produkt anvender laserlys. En af følgende mærkater anvendes på scanneren. Læs venligst sikkerhedsforanstaltningen. (DK)

Varoitus:

Tämä tuote käyttää laservaloa. Skannerissa on jokin seuraavista tarroista. Lue Huomio-kohta. (FI)

Warnung:

Dieses Produkt verwendet Laserlicht. Eines der folgenden Etiketten befindet sich auf dem Scanner. Bitte lesen Sie den Gefahrenhinweis. (DE)

Attenzione:

Questo prodotto utilizza luce laser. Una delle etichette seguenti c'è ubicata sullo scanner. Si raccomanda di leggere con attenzione le avvertenze riportate. (IT)

Advarsel:

Dette utstyret bruker laserlys. En av følgende etiketter er plassert på scanneren. Les advarselen på etiketten. (NO)

Advertencia:

Este producto usa luz de láser. Las etiquetas se proveen en la máquina exploradora. Por favor, lea detenidamente la explicación para las precauciones. (ES)

Waarschuwing:

Dit product gebruikt laserlicht. Een van de volgende labels is op de scanner aangebracht. Lees a.u.b. de waarschuwing onder Oppassen. (NL)



Laser Light Safety Statement



<p>Uyarý:</p> <p>Bu ürün lazer ýňýöý kullanýr. Απαðýdaki etiketlerden bir tanesi tarayýcýnýn üstünde saðlanýr. Lütfen Dikkat ifadesini okuyun. (TR)</p>	<p>Προειδοποίηση:</p> <p>Αυτό το προϊόν χρησιμοποιεί λέιζερ φως. Υπάρχει μία από τις ακόλουθες ετικέτες στο σαρωτή. Παρακαλούμε διαβάστε τη δήλωση με τίτλο Προσοχή. (GR)</p>
<p>경고:</p> <p>본 제품은 레이저 광선을 사용합니다. 다음 라벨 중 하나가 스캐너에 제공됩니다. 주의 사항을 읽어 주십시오. (KR)</p>	<p>警告:</p> <p>この製品はレーザー光線を使用します。 次のラベルのうち1つがスキャナーに貼られています。 注意事項をお読みください。 (JP)</p>
<p>警告:</p> <p>本产品使用激光。 下列一个标签将随扫描仪一道提供。 请阅读“当心”一栏的内容。(CN)</p>	<p>Legend:</p> <p>Chinese-CN; Danish-DK; Dutch-NL; English-US; ;Finnish-FI; French-FR; German-DE; Greek-GR; Italian-IT; Japanese-JP; Korean-KR; Norwegian-NO; Portuguese-PT; Spanish-ES; Swedish-SE; Turkish-TR</p>

Labels - MX3-CE Hand Held Computer





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Introduction

Overview

The MX3-CE is a rugged, portable, hand-held Windows CE computer capable of wireless data communications. The MX3-CE can transmit information using a 2.4 GHz radio (with an internally mounted antenna) and it can store information for later transmission through an RS-232 or InfraRed or USB port.

The MX3-CE is horizontally oriented and features electroluminescent backlighting for the greyscale display. The touch-screen display supports graphic features and Windows icons that the Window's CE (WinCE 3.0) operating system supports. The keys on the keypad are constructed of a phosphorescent material that can easily be seen in dimly lighted areas.

The MX3-CE is a Windows CE compatible computer that can be scaled from a limited function batch computer to an integrated RF scanning computer.

A stylus is enclosed with the MX3-CE to assist in entering data and configuring the unit.

Note: 6400 System Access Points are compatible with an MX3-CE equipped with Proxim 2.4 GHz radios and drivers. 6500 System Access Points are compatible with an MX3-CE equipped with Lucent 2.4 GHz radios and drivers. The MX3-CE software load includes both Lucent and Proxim drivers.



The "MX3-CE Reference Guide" contains MX3-CE technical information and advanced functions.










Please refer to the "MX3 Cradle Reference Guide" for technical information relating to the MX3-CE Desk Top and Vehicle Mount cradles.

Note: Until the Main Battery and Backup Battery are completely depleted, the MX3-CE is always On.

Document Conventions

This reference guide uses the following document conventions:

Convention	Meaning
ALL CAPS	All caps are used to represent disk directories, file names, and application names.
Menu / Choice	Rather than use the phrase "choose the Save command from the File menu", this manual uses the convention "choose File / Save".
"Quotes"	Indicates the title of a book, chapter or a section within a chapter (for example, "Document Conventions").
< >	Indicates a key on the keypad (for example, <Enter>).
	Indicates a reference to other documentation.
	Differences in operation or commands due to radio type.
ATTENTION	Keyword that indicates vital or pivotal information to follow.
	Attention symbol that indicates vital or pivotal information to follow. Also, when marked on product, means to refer to the manual or operator's guide.
	International fuse replacement symbol. When marked on the product, the label includes fuse ratings in volts (v) and amperes (a) for the product.
<i>Note:</i>	Keyword that indicates immediately relevant information.
CAUTION 	Keyword that indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
WARNING 	Keyword that indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
DANGER 	Keyword that indicates a imminent hazardous situation which, if not avoided, will result in death or serious injury.

MX3-CE Environmental Specifications

Feature	Specification
Operating Temperature	-4°F to 122°F (20°C to 50°C) [non-condensing]
Storage Temperature	-22°F to 158°F (-30°C to 70°C) [non-condensing]
Water and Dust	IEC IP65
Operating Humidity	Up to 90% non-condensing at 104°F (40°C)
Vibration	Based on MIL Std 810D
ESD	8 kV air, 4kV contact
Shock	75G, 5ms duration, 100 shock impacts


Warnings and Labels

Caution



This device is intended to transmit RF energy. In accordance with FCC and Industry Canada radio-frequency safety regulations, when operating this device with the Hip-Flip accessory, it should be used in accordance with the user's instructions. Additionally, the user should take care to ensure that a minimum separation distance of 20cm (7.8 in.) is maintained from the antenna to nearby persons. Use of this device in a manner not consistent with these instructions can increase the risk of RF exposure.

- Do not look into the laser's lens.
- Do not stare directly into the laser beam.
- Do not remove the laser caution labels from the MX3-CE.
- Do not connect the laser barcode window to any other device. The laser barcode window is certified for use with the MX3-CE only.

<p>Caution:</p> 	<p><i>Laser radiation when open. Please read the caution labels.</i></p> <p><i>Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.</i></p>
--	--

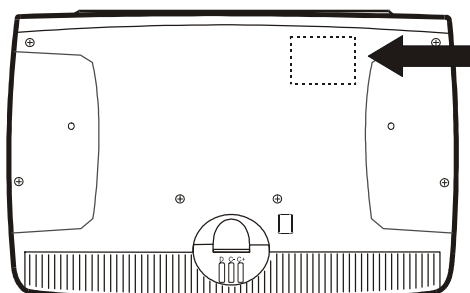


Figure 1 CDRH / IEC 825 Caution Label Location - MX3-CE, Back



Figure 2 Caution Label - Scanner

Quick Start

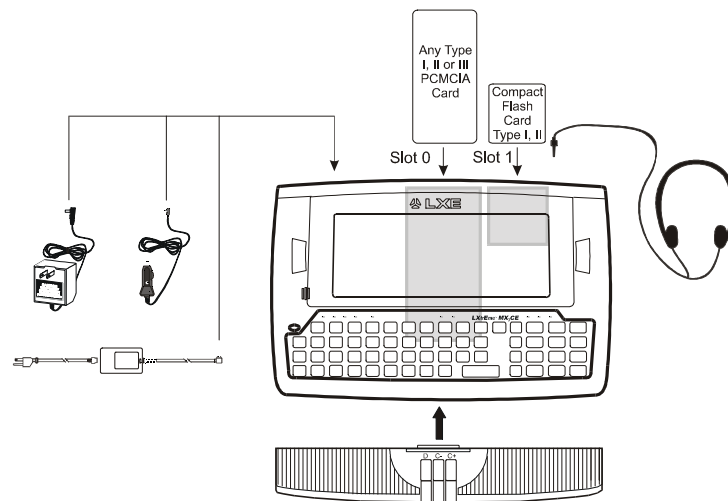


Figure 3 Hardware Configuration

This section's instructions are based on the assumption that your new system is pre-configured and requires only accessory installation (e.g. hand strap, external barcode scanner) and a power source.

Use this guide as you would any other source book -- reading portions to learn about the MX3-CE, and then referring to it when you need more information about a particular subject. This guide takes you through an introduction to and operation of the LXE MX3-CE.

In general, the sequence of events is:

1. Insert a fully charged battery.
2. Connect an external power source to the unit (if required).
3. If the screen does not automatically display, tap the Power button.
4. Adjust screen display, audio volume and other parameters if desired.

Components

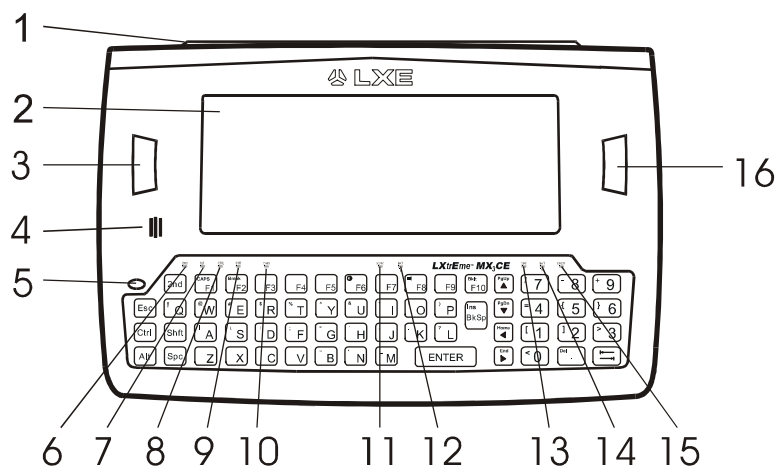


Figure 4 Front of MX3-CE

1	Endcap	9	Shift LED
2	Touch Screen Display	10	Caps LED
3	Scan or Enter	11	Scanner LED
4	Beeper	12	Backup Battery LED
5	On/Off Button	13	Status LED
6	2nd LED	14	Main Battery LED
7	Alt LED	15	Charger LED
8	Ctrl LED	16	Scan or Enter

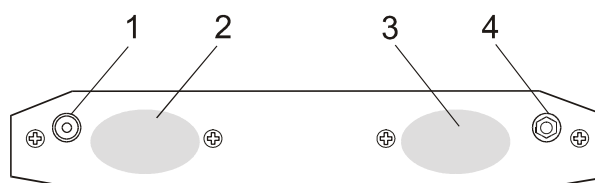


Figure 5 Endcap

1	DC Power Jack	3	Com 1 (Serial or USB) Port
2	Com 3 (Serial or Scanner) Port	4	Audio Jack

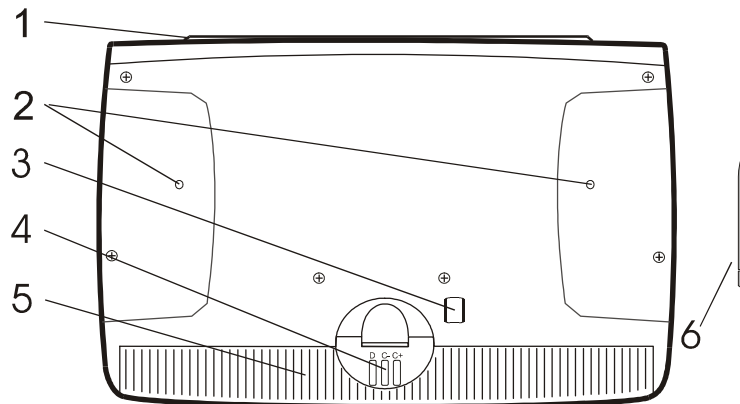


Figure 6 Back of MX3-CE

- | | | | |
|---|-----------------------------|---|-----------------------|
| 1 | Endcap | 4 | Cradle Input Contacts |
| 2 | Leather Handstrap Connector | 5 | Main Battery |
| 3 | IR Port (Com 2 Port) | 6 | Stylus |

Insert Main Battery

As soon as the battery is inserted into the MX3-CE, the unit is automatically powered on (or returns from the Critical Suspend or Suspend state).

*Note: **New batteries must be charged prior to first use.** This process takes up to four hours in an LXE Multi-Charger and eight hours with an external power source attached to the MX3-CE.*

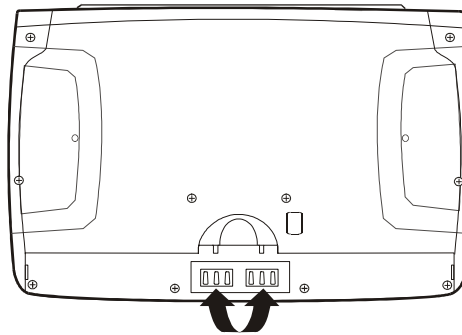


Figure 7 MX3-CE Battery Contacts

The MX3-CE Battery Compartment is located at the bottom of the back of the computer. The arrows in the figure above point to the battery and cradle contacts in the computer.

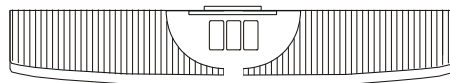


Figure 8 Main Battery

Place the battery in the compartment, making sure the side of the battery with six contacts matches up with the battery contacts in the computer battery compartment. Do not slide the battery sideways into the compartment.

Firmly press the battery into the compartment until the Retaining Clip on the battery clicks. The battery is now securely fastened to the MX3-CE.

Power Button

Note: Refer to the section titled "Power Modes" later in this manual for information relating to the power states of the MX3-CE.

The power button is located above the ESC key on the keypad. When a battery is inserted in the MX3-CE for the first time, the unit automatically powers on -- the Power button does not need to be pressed.

Quickly tapping the Power button places the MX3-CE immediately in Suspend mode. Quickly tapping the Power button again, or touching the screen, immediately returns the MX3-CE from Suspend.

Reboot Sequence

Hold the Power key down until the display goes out (about 15 seconds), then release the Power button.

When the WinCE desktop is displayed or an application begins, the power up (or reboot) sequence is complete.

Connect External Power Supply (Optional)

There are three external power supplies available:

- US AC/DC 12V Power Supply
- Cigarette Lighter Adapter
- International AC/DC 12V Power Supply

In North America, this unit is intended for use with a UL Listed ITE power supply with output rated 12-80 V dc, minimum 3.5 A. Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated 12-80 V dc, minimum 3.5 A.

The MX3-CE DC power jack is located on the endcap. The cradle power jack is located on the back of the cradle.

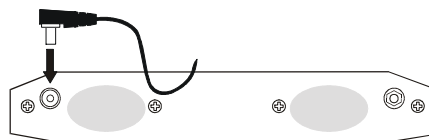


Figure 9 Connect External Power Supply

1. Insert the barrel connector into the MX3-CE power jack and push in firmly.
2. The CHGR LED above the keypad illuminates when the MX3-CE is receiving external power through the power jack. The Main Battery recharges when the MX3-CE is connected to an external power source.

Note: When the MX3-CE is receiving external power through a cradle, the cradle's Status LED is illuminated and the MX3-CE's CHGR LED are illuminated.

Connect Audio Jack (Optional)

The MX3-CE audio jack is located on the endcap.

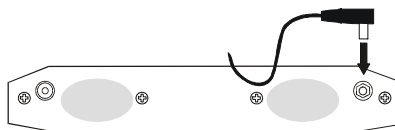


Figure 10 Connect Audio Jack

Insert the barrel end of the connector into the MX3-CE audio jack and push in firmly.

Note: The audio option draws power from the battery.

Attach Hand Strap (Optional)

An elastic handstrap is available for the MX3-CE. Once installed, the handstrap provides a means for the user to secure the computer to their hand. It is adjustable to fit practically any size hand and does not interfere with battery charging when the MX3-CE is in a cradle.

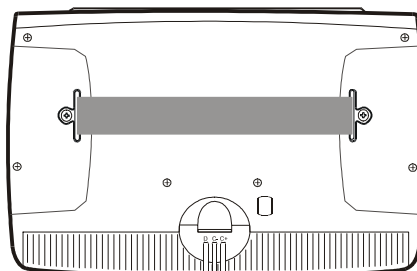


Figure 11 MX3-CE With Handstrap Installed

Tool Required: #1 Phillips Screwdriver

Installation

1. Place the unit in Suspend mode or turn the unit off to prevent accidental key presses when you are attaching the handstrap.
2. Place the MX3-CE, with the screen facing down, on a flat stable surface.
3. Attach the hand strap to the MX3-CE with the screws and washers provided.
4. Test the strap's connection making sure the MX3-CE is securely connected to each end of the strap.

Periodically check the hand strap for wear and the connection for tightness. If the hand strap gets worn or damaged, it must be replaced.

Tapping the Touchscreen with a Stylus

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil or sharp object to write on the touch screen.

Hold the stylus as if it were a pen or pencil. Touch an element on the screen with the tip of the stylus then remove the stylus from the screen. Firmly press the stylus into the stylus holder on the MX3-CE when the stylus is not in use.

Like using a mouse to left-click icons on a computer screen, using the stylus to tap icons on the MX3-CE display is the basic action that can:

- Open applications
- Choose menu commands
- Select options in dialog boxes or drop-down boxes
- Drag the slider in a scroll bar
- Select text by dragging the stylus across the text
- Place the cursor in a text box prior to typing in data or retrieving data using the integrated barcode scanner or an input/output device connected to the serial port.

An extra or replacement stylus can be ordered from LXE. See Appendix B "Contacting LXE" for telephone numbers and the section titled "Accessories" for the stylus part number.

Keypad Shortcuts

Use keyboard shortcuts instead of the stylus when the MX3-CE is running WinCE.

- Press Tab and an Arrow key to select a file.
- Press Shift and an Arrow key to select several files.
- Once you've selected a file, press Alt-Enter to open its Properties dialog.
- Press Shift-Backspace (or 2nd + numeric dot) to delete a file.
- Right mouse click – hold down the Alt key and touch the screen. Select a menu option.

Set The Display Contrast

Adjusting screen contrast lightens or darkens the characters to make them visible at a comfortable level. The contrast is incremented or decremented one step each time the contrast key is pressed.

- To adjust screen contrast, locate the <F6> key at the top of the keypad. Adjust the display contrast by pressing the:
 - 2nd key, then the <F6> key
 - Use the Up Arrow and Down Arrow keys to adjust contrast until the display lightens or darkens to your satisfaction.
 - Press the Enter key to exit this mode.

Set the Display Backlight Timer

Note: Refer to the section titled "Power Modes" later in this manual for information relating to the power states of the MX3-CE.

Select **Start / Settings / Control Panel / Display Properties / Backlight** tab. Change the parameter values and tap OK to save the changes.

The first option should be set when the MX3-CE will be running on battery power only. The second option should be set when the MX3-CE will be running on external power (e.g. AC adapter, cigarette adapter, powered cradle).

The default value for the battery power timer is 3 seconds. The default value for the external power timer is 2 minutes.

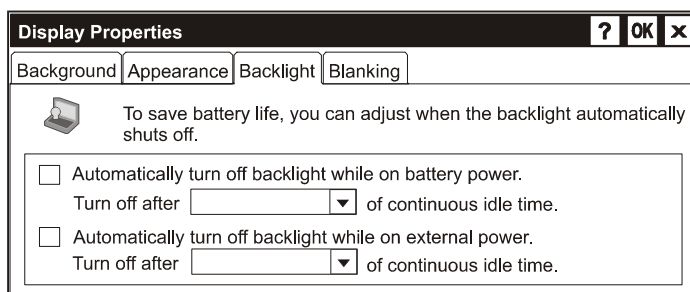


Figure 12 Display Properties / Backlight

Set the Display Blanking Timer

Note: Refer to the section titled "Power Modes" later in this manual for information relating to the power states of the MX3-CE.

Select **Start / Settings / Control Panel / Display Properties / Blanking tab**. This option is also available by selecting **Start / Settings / Control Panel / Power Properties / Blanking tab**. Change the parameter values and tap OK to save the changes.

The first option should be set when the MX3-CE will be running on battery power only. The second option should be set when the MX3-CE will be running on external power (e.g. AC adapter, cigarette adapter, powered cradle). The default value for the battery power timer is 15 seconds. The default value for the external power timer is 2 minutes.

Set the MX3-CE Power Off Timer

Note: Refer to the section titled "Power Modes" later in this manual for information relating to the power states of the MX3-CE.

Select **Start / Settings / Control Panel / Power Properties / Power Off tab**. Change the parameter values and tap OK to save the changes.

The first option should be set when the MX3-CE will be running on battery power only. The second option should be set when the MX3-CE will be running on external power (e.g. AC adapter, cigarette adapter, powered cradle). The default value for the timer is 5 minutes.

Set The Audio Speaker Volume

Note: An application may override the control of the speaker volume. Turning off sounds saves power and prolongs battery life.

The audio volume can be adjusted to a comfortable level for the operator. The volume is increased or decreased one step each time the volume key is pressed. The MX3-CE has an internal speaker and a jack for an external headset.

Using the Keypad

Note: Volume & Sounds (in Control Panel) must be enabled before the following key sequences will adjust the volume.

◀ To adjust speaker volume, locate the <F8> key at the top of the keypad. Adjust the speaker volume by pressing the:

- 2nd key, then the <F8> key to enter Volume change mode.
- Use the Up Arrow and Down Arrow keys to adjust volume until the speaker volume is satisfactory.
- Press the Enter key to exit this mode.

Using the Touch Screen

Select **Start / Settings / Control Panel / Volume & Sounds / Volume tab**. Change the volume setting and tap OK to save the change.

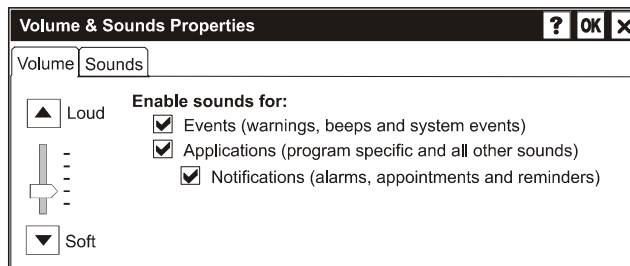


Figure 13 Adjust Audio Volume

Enter Data

You can enter data into the MX3-CE through several different methods. The Scanner window provides barcode data entry, the RS-232 or the IR port are used to input/output data, and the keypad provides manual entry.

MX3-CE's with a touch screen and Microsoft WindowsCE software can use a stylus to input data, the COM ports and/or the keypad.

Keypad Entry

The keypad is used to manually input data that is not collected otherwise. Almost any function that a full sized computer keyboard can provide is duplicated on the MX3-CE keypad but it may take a few more keystrokes to accomplish a keyed task.

Almost every key has two or three different functions. The primary alpha or numeric character is printed on the key.

For example, when the 2nd key is selected pressing the desired second-function key will produce the 2nd character. The specific 2nd character is printed above the corresponding key.

Please refer to "Appendix A - Key Maps" for instruction on the specific keypresses to access all keypad functions.

Stylus Data Entry

Note: This section is directed to the MX3-CE operator. The assumption is that the unit has been configured and the touch panel calibrated by the System Administrator prior to releasing the MX3-CE for operator use. The touch screen should be calibrated before initial use.

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil or sharp object to write on the touch screen.

The stylus performs the same function as the mouse that is used to point to and click elements on a desk top computer. The stylus is used in the same manner as a mouse – single tap or double tap to select menu options, drag the stylus across text to select, hold the stylus down to activate slider bars, etcetera.

Hold the stylus as if it were a pen or pencil. Touch an element on the screen with the tip of the stylus then remove the stylus from the screen. The touch screen responds to an actuation force (touch) of up to 4 oz. of pressure.

The stylus can be used in conjunction with the keyboard and scanner and an input/output device connected to one of the MX3-CE's serial ports.

- Touch the stylus to the field of the data entry form to receive the next data feed.
- The cursor begins to flash in the field.
- The unit is ready to accept data from either the keyboard, integrated scanner or a device connected to a serial port.

Scanner Entry

Read all cautions, warnings and labels **before using the laser scanner.**

To scan with the laser barcode reader, point the laser window towards a barcode and press the Scan button. You will see a red laser beam strike the barcode.



Figure 14 Scan Beam

Align the red beam so that the barcode is centered within the beam. The laser beam must cross the entire barcode. Move the MX3-CE towards or away from the barcode so that the barcode takes up approximately two-thirds the width of the beam.

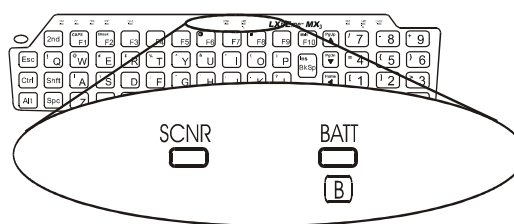


Figure 15 Scanner LED Location

The SCNR LED turns red when the laser beam is on. Following a good read, the LED turns green, indicating a successful scan. Beeps may be heard after a good read, depending on the application running on the MX3-CE.

The laser and SCNR LED automatically turn off after a successful or unsuccessful read. The scanner is ready to scan again when the Scan key is pressed.

Charge Battery in LXE Multi-Charger

The Main Battery can be charged in the LXE Multi-Charger. The Main Battery charges the Backup Battery.

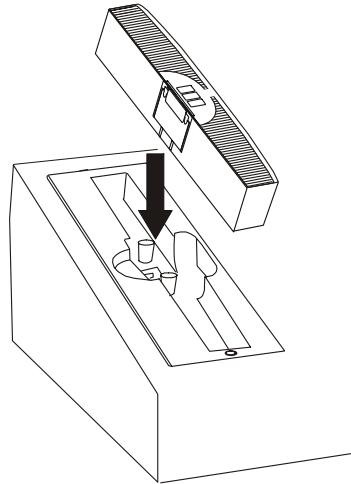


Figure 16 Insert Main Battery in Charging Cup

Insert the Main Battery into any charging cup in the Multi-Charger. The retaining clip will snap the battery into place in the charging cup.

Do not "slam" or slide the battery into the charging cup.

Failure to follow these instructions can result in damage to the main battery or the Multi-Charger.

The MX3-CE Hand Held Computer

Touch Screen Display

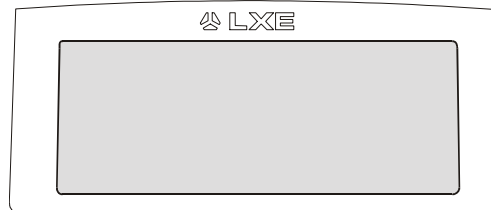


Figure 17 MX3-CE Touch Screen Display

The MX3-CE Touch Screen Display is a transfective monochrome LCD unit capable of supporting greyscale VGA graphics modes. Display size is 640 x 240 pixels with an electroluminescent backlight. The display covering is designed to resist stains. The touch screen allows signature capture and touch input. A pen stylus is included. The touch screen responds to an actuation force (touch) of up to 4 oz.

Display Backlight

The Display backlight is turned on when the unit returns from Suspend Mode. The display backlighting feature is programmable and activates based on power source and amount of idle time before entering the Suspend state.

Touch Screen Calibration

If the MX3-CE is not responding properly to pen touch taps, the touch screen may need to be recalibrated. Contact your System Administrator for assistance.

To recalibrate the screen, select **Start / Settings / Control Panel / Stylus / Calibration**.

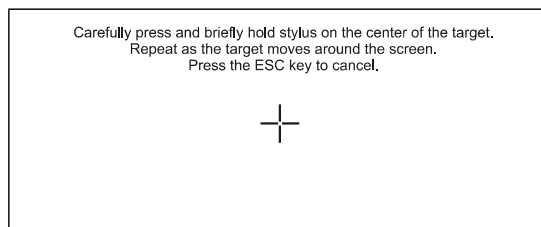


Figure 18 Touch Screen Recalibration

To start, tap Recalibrate. Follow the instructions on the screen and press the Enter key to save the new calibration settings or press Esc to cancel or quit.

See the "MX3-CE Reference Guide" for complete instructions.

Power Modes

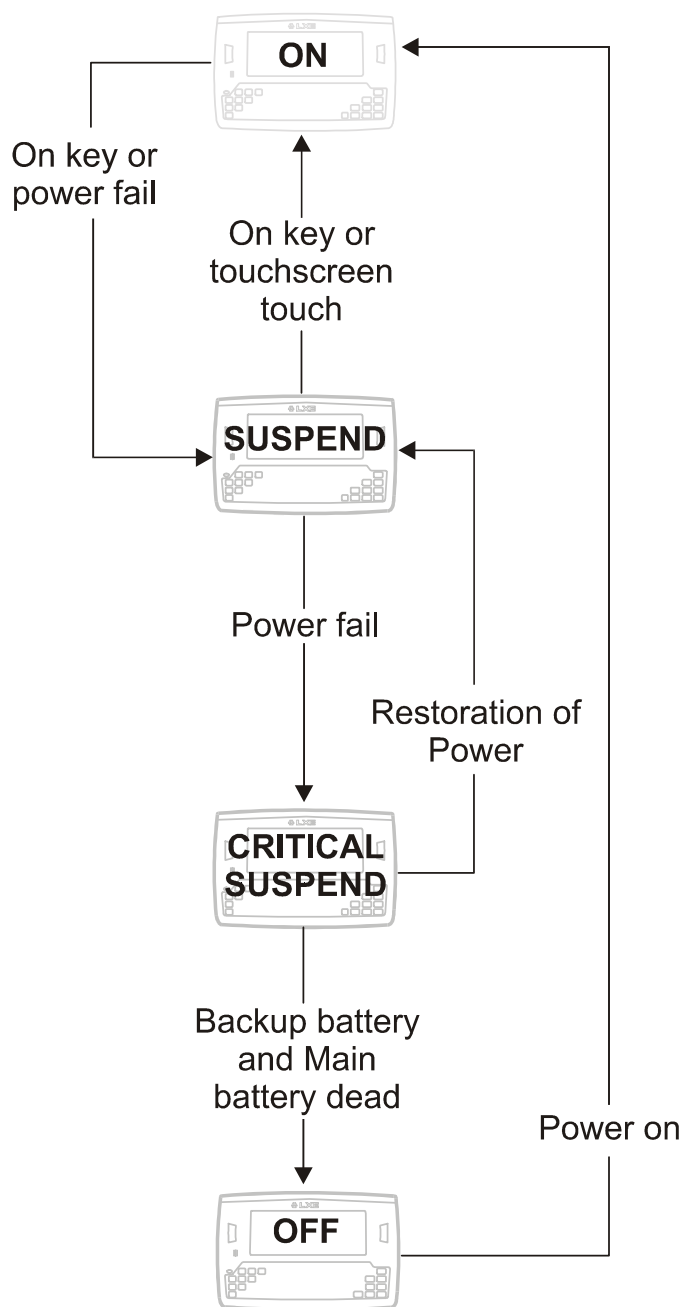


Figure 19 Power Modes – On, Suspend, Critical Suspend and Off

On Mode

The Display

When the display is On:

- the keyboard, touchscreen and all peripherals function normally
- LED indicators are not illuminated
- the display backlight is on until the Backlight timer expires
- the display does not blank until the Blank timer expires
- when the Main Battery is hot-swapped, the display is turned Off.

The MX3-CE

After a new MX3-CE has been received, a charged Main Battery inserted, and the Power button tapped, the MX3-CE is always On until both batteries are drained completely of power.

When the Main Battery and Backup Battery are drained completely, the unit is in the Off mode. The unit transitions from the Off mode to the On mode when a charged Main Battery is inserted.

LED Indicators

LED	When On ...
2nd	Orange. The next keypress is a 2 nd keypress.
ALT	Orange. The next keypress is an ALT keypress.
CTRL	Orange. The next keypress is a CTRL keypress.
SHFT	Orange. The next letter is the uppercase letter on alpha keys and the shifted character on the numeric keypad keys.
CAPS	Orange. Uppercase letters are active until the CAPS key sequence is pressed again.
SCNR	Integrated barcode scanner function. <ul style="list-style-type: none"> • Red - scanning. • Green - good scan.
BATT B	Red. Backup Battery. When illuminated, the backup battery is charging.
STAT	Status Indicator. <ul style="list-style-type: none"> • Blinking Green when Display and/or Blank timer expires. • <i>Not illuminated when the MX3-CE is in Suspend Mode.</i>
BATT M	Main Battery. When illuminated, main battery capacity is low. <ul style="list-style-type: none"> • Steady Red – low battery. • Blinking Red – power fail.
CHGR	Charger. When on, the MX3-CE is receiving external power either from the DC power jack or the MX3-CE is seated in a powered cradle. <ul style="list-style-type: none"> • Red - Main Battery is charging. • Green - battery charge is complete and the MX3-CE is connected to external power through the power jack or a powered cradle.

Suspend Mode

The Display

Note: When the display is Off, the unit is still On. The unit functions normally – tethered scanner trigger press, integrated scanner trigger press or Scan key presses will cause scans. Communications through the radio or serial ports continue.

Display Suspend timers are set using **Start / Settings / Control Panel / Display Properties / Blanking**.

The display is turned off when one of the following occurs:

- the display timer expires before a wakeup event takes place
- the Power button is tapped which immediately places the unit into Suspend Mode.

The display backlight is turned off at the same time as the Display is turned off. Display Backlight Suspend timers are set using **Start / Settings / Control Panel / Display Properties / Backlight**.

The Status LED blinks green when the Display enters Off mode.

Any of the following will wake the display and display backlight:

- Any key press on the keypad
- Stylus-touch on the touch screen

When the display wakes up, the Display Blanking Timer and Display Backlight Timer begin the countdown again. When any of the above events occur prior to the timers expiring, the timers begin the countdown again.

The first display wakeup key press or touch are not sent to the operating system or running application – the first keypress or touch are only used to turn the display and backlight On. Once the display (or backlight) is On, the keyboard and touch screen function normally.

The MX3-CE

The Suspend mode is entered when the unit is inactive for a predetermined period of time or the operator taps the Power button.

MX3-CE Suspend timers are set using **Start / Settings / Control Panel / Power Properties / Power Off**.

Any of the following will wake the unit and reset the display and display backlight timers:

- Any key press on the keypad
- Stylus-touch on the touch screen
- Power button tap
- COM 1 CTS
- COM 3 CTS
- PC Card activity
- USB connection

When the unit wakes up, the Display, Display Backlight and the Power Off timers begin the countdown again. When any one of the above events occurs prior to the Power Off timer expiring, the timer starts the countdown again.

The first wakeup key press or touch is not sent to the operating system or running application – the first keypress or touch is only used to wake up the unit and reset the timers. Once the unit has transitioned from the Suspend mode to the On mode, the unit, keyboard and touch screen function normally.

Critical Suspend Mode

The purpose of the Critical Suspend mode is to reduce power consumption of the MX3-CE to a low level that still retains the contents of SDRAM. The unit enters Critical Suspend Mode only when the Main Battery has failed or is hot-swapped. The Backup Battery is supplying power to the unit during Critical Suspend Mode.

When hot-swapping (the Main Battery is removed), the display turns off, the BATT M LED begins to flash red, all peripherals are shut down, the CPU clock is stopped, and power is removed from the PCMCIA card.

When the MX3-CE is in the Critical Suspend state (the Main Battery is in place and the unit is being powered by the Backup Battery), the display turns off, the BATT M LED begins to flash red, all peripherals are shut down, the CPU clock is stopped, and power is removed from the PCMCIA card. The MX3-CE is saving the state prior to the Main Battery failing and cannot be used.

If a new fully charged main battery is installed before the Backup Battery is depleted (approximately 5 minutes) the MX3-CE transitions to the Suspend state. To resume operation tap the Power key once or touch the screen with the stylus.

If the Backup Battery is depleted before a fully charged Main Battery is inserted, the MX3-CE immediately turns itself Off and all unsaved information is lost. Insert a fully charged Main Battery and press the Power button to turn the MX3-CE On.

Off Mode

The unit is in Off Mode when the Main Battery and the Backup Battery are depleted. Insert a fully charged Main Battery and press the Power button to turn the MX3-CE On.

Programmable Buttons

The buttons to the left and right of the display can be programmed by the System Administrator to perform the following functions:

Scan Pressing this key activates the integrated laser scanner, if installed. See the section titled "Scan Key Function."

Enter Pressing this key confirms a forms entry or transmits information. See the section titled "Enter Key Function."

To edit the button parameters, select **Start / Settings / Control Panel / Scanner**. Change the parameter values and tap OK to save the changes.

See the "MX3-CE Reference Guide" for complete instructions.

The default setting for the right button is Enter. The default setting for the left button is Scan. When the MX3-CE does *not* have an integrated scanner, both buttons function as Enter keys.

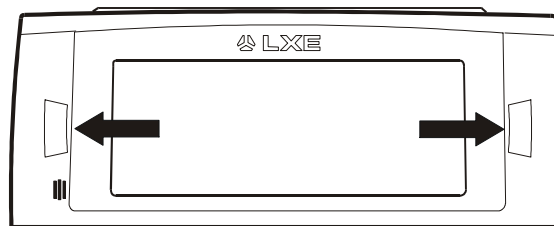


Figure 20 Programmable Buttons (Scan / Enter)

Endcaps and COM Ports

The MX3-CE supports three COM port options. Two external serial ports are dependent on the end cap chosen. A third serial port is used to support an infrared transceiver (barcode reader). An additional endcap configuration supports serial and USB "slave" input/output at 1.5 Mbps.

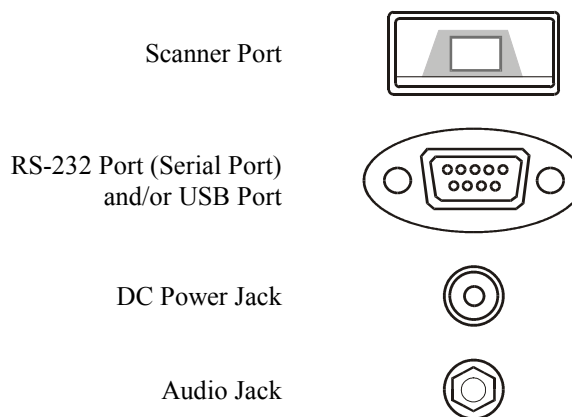


Figure 21 Endcap Connectors

The COM 2 port is always the IR port on the back of the MX3-CE, regardless of the type of endcap installed.

On the Standard Range Scanner / Serial Port endcap COM 3 is the Integrated Scanner port. The integrated barcode scanner scans only when the MX3-CE Scan button is pressed. To edit Scanner Com Port parameters, select **Start / Settings / Control Panel / Scanner**. Change the parameter values and tap OK to save the changes.

On the Dual Serial Port endcap the COM1 port is the serial port on the right side of the endcap when the display is facing you.

Tethered Scanners

The MX3-CE Scan buttons have no effect on tethered barcode scanners (connected to a serial port). Tethered scanners read barcode scans only when the trigger on the tethered scanner is pressed.

To set the MX3-CE to use a tethered scanner, select **Start / Settings / Control Panel / Scanner**. Upon selecting "External Scanner", +5V power is automatically assigned to the port.

USB Port

The USB port requires a DB9 to USB cable (available from LXE).

The serial port/USB port also supports serial data transfer (using a null modem cable) and non-host USB I/O at 1.5 Mbps. The MX3-CE automatically detects the cable configuration. Refer to section titled "Accessories" later in this manual for part numbers for the DB9-USB cable and the null modem cable.

IR Port

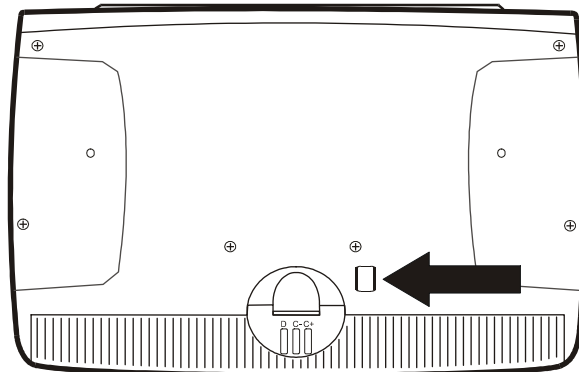


Figure 22 IR Port (COM 2)

The InfraRed (IR) port provides a means of transferring information to a device with a similar port and the proper software. The IR port can be used to communicate with printers or a host computer with the use of an adapter.

The IR Port is specified as COM 2 and is a bi-directional half-duplex infrared port. It supports the Slow IrDA (Infrared Data Access) PHY Layer standard that allows communication speeds up to 115k baud.

When sending data through the IR port to another MX3-CE's IR port, make sure both units are in close proximity to each other. The IR operating envelope has a distance range of 2 cm (.79 inches) to 1 meter (3.2 feet) with a viewing angle of 30 degrees.

See the "MX3-CE Reference Guide" for complete instructions.

The Keypad

The QWERTY keypad is phosphorescent. A phosphorescent keypad does not use a keypad backlight but glows in dim/dark areas *after exposure to a light source*.

The keypad is installed and configured by LXE.

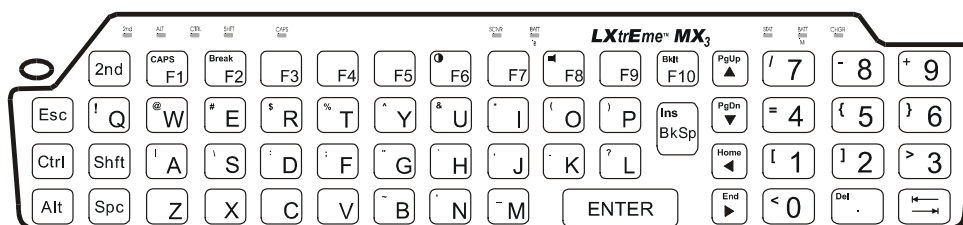


Figure 23 The QWERTY Keypad

The keymaps (keypress sequences) are located in “Appendix A - Key Maps.”

Scan Key Function



(MX3-CE's with Scanner endcaps only.) The Scan key activates the scanner when a scanner endcap is installed and the Scan button is pressed. The internal scanner scans only when the Scan button is pressed. A Scan button press has no effect on externally attached scanners.

When there is no integrated scanner endcap, the Scan keys function as Enter keys.

Enter Key Function



The Enter key is used to confirm a forms entry or to transmit information. How it is used is determined by the application running on the computer.

2nd Key Function




The 2nd key is used to activate the 2nd functions of the keypad. Printed on many keys at the upper left corner are small characters that represent the 2nd function of that key. Using the 2nd key activates the second key function. Note that the 2nd key only stays active for one keystroke. Each time you need to use the 2nd function you must press the 2nd key. To cancel a 2nd function before pressing another key, press the 2nd key again. When the 2nd function is active, the 2nd LED illuminates.

Ctrl Key Function




The Ctrl key enables the control functions of the keypad. This function is similar to a regular keyboard's Control key. Note that the Ctrl key only stays active for one keystroke. Each time you need to use a Ctrl function, you need to press the Ctrl key before pressing the desired key. When the Ctrl function is active, the Ctrl LED illuminates.

Alt Key Function


 The Alt key enables the alternate functions of the keypad. This function is similar to a regular keyboard's Alt key. Note that the Alt key only stays active for one keystroke. Each time you need to use an alternate function, you need to press the Alt key before pressing the desired key. When the Alt function is active, the Alt LED illuminates.

Shft Key Function

 The Shft key enables the shifted functions of the keypad. This function is similar to a regular keyboard's Shift key. Note that the Shift key only stays active for one keystroke. Each time you need to use a Shifted function, you need to press the Shft key before pressing the desired key. When the Shft function is active, the Shft LED illuminates.

When the Shft key is pressed the next key is determined by the major key legends, i.e., the alpha keys display lower case letters -- when CAPS is On alpha characters are capitalized. For example, when CAPS is on and the Shft key and the G key are pressed, a lower case g is displayed.

Spc Key Function

 The Spc key adds a space to the line of data on the display. This function is similar to a regular keyboard's Spacebar. Note that the Spc key only stays active for one keystroke.

Mode Key Functions

Caps Key and CapsLock Mode

This function is similar to a regular keyboard's CapsLock key. Note that the CapsLock mode stays active until the CapsLock key sequence is pressed again. Each time you need to use a Caps function, you need to press the Caps key sequence first. To cancel a CapsLock function press the Caps key sequence again. When the CapsLock mode is active, the Caps LED illuminates.

The CapsLock key sequence is 2nd + F1.

Keypress Sequences

See Appendix A for key maps for all keypads.

Keypad LED Functions

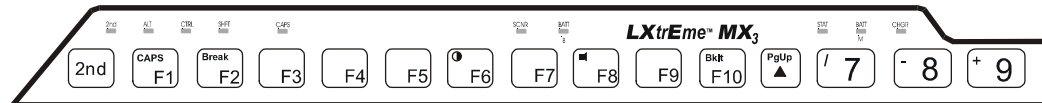


Figure 24 Function LEDs

Across the top of the keypad are LEDs that provide visual cues to current computer operation. When the LED is not illuminated, the function is inactive.

LED	When illuminated ...
2nd	The next keypress is a 2 nd keypress. <ul style="list-style-type: none"> Orange when on and unlit when off.
ALT	The next keypress is an ALT keypress. <ul style="list-style-type: none"> Orange when on and unlit when off.
CTRL	The next keypress is a CTRL keypress. <ul style="list-style-type: none"> Orange when on and unlit when off.
SHFT	The next letter is the uppercase letter on alpha keys and the shifted character on the numeric keypad keys. <ul style="list-style-type: none"> Orange when on and unlit when off.
CAPS	Uppercase letters are active until the CAPS key sequence is pressed again. <ul style="list-style-type: none"> Orange when on and unlit when off.
SCNR	Barcode scanner function, affected by both tethered scanners and the scanner endcap. <ul style="list-style-type: none"> Red - scanning. Green - good scan. Unlit - scanner is inactive.
BATT B	Backup Battery. When illuminated, the backup battery is charging. When unlit, the Backup Battery is not charging
STAT	Status Indicator. <ul style="list-style-type: none"> Blinking Green when display Suspend state begins.
BATT M	Main Battery. When illuminated, main battery capacity is low. <ul style="list-style-type: none"> Red – low battery. Blinking Red – power fail. Unlit - Main Battery is fully charged.
CHGR	Charger. When on, the MX3-CE is receiving external power either from the DC power jack or the MX3-CE is seated in a powered cradle. <ul style="list-style-type: none"> Red - Main Battery is charging. Green - battery charge is complete and the MX3-CE is connected to external power through the power jack or a powered cradle.

Batteries

Note: New batteries must be charged prior to use.

The MX3-CE computer is designed to work with a Lithium-Ion (Li-ion) battery from LXE. Under normal conditions it should last approximately eight to ten hours before requiring a recharge. The more you use the scanner or the RF transmitter, the shorter the time required between battery recharges. The MX3-CE keeps date and time valid for a minimum of four days using a fully charged Backup Battery and a Main Battery that has reached the Low Warning point.

Main Battery

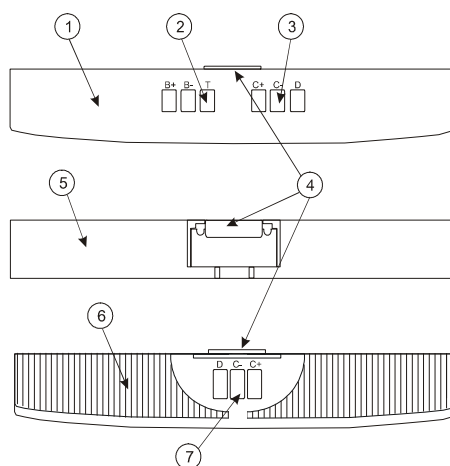


Figure 25 Main Battery

- | | |
|---|-------------------------|
| 1 | Front Side |
| 2 | Contacts, Main Battery |
| 3 | Contacts, Cradle Output |
| 4 | Retaining Clip |
| 5 | Top Side |
| 6 | Back Side |
| 7 | Contacts, Cradle Input |

The main battery has a rugged plastic enclosure that is designed to withstand the ordinary rigors of an industrial environment. Exercise care when transporting the battery making sure it does not come in contact with excessive heat or any power source other than an LXE MultiCharger or MX3-CE unit.

Backup Battery

The internal Nickel Cadmium (NiCd) backup battery provides power to the unit for a short amount of time when the main battery has been depleted, removed or has failed. The backup battery requires no user intervention. Replacement is performed by LXE.

Note: An uninterrupted external power source (wall AC adapters or DC/DC converters) transfers power to the MX3-CE internal charging circuitry which, in turn, recharges the Main Battery and Backup Battery.

Battery Hot-Swapping

When the battery power level is low, the BATT-M LED illuminates and remains on. You can replace the main battery without shutting the unit off. Simply replace the discharged battery with a fully-charged battery. The backup battery will retain data during a main battery hot-swap for at least five minutes.

Battery Chargers

LXE Multi-Charger

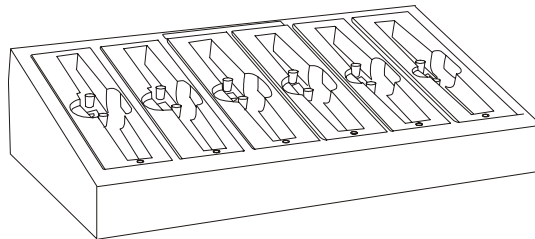


Figure 26 LXE Multi-Charger

The Main Battery can be charged in the LXE Multi-Charger. The Main Battery charges the Backup Battery using the MX3-CE's internal charging circuitry.

External Power Supply (Optional)

Note: In North America, this unit is intended for use with a UL Listed ITE power supply with output rated 12-80 V dc, minimum 3.5 A. Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated 12-80 V dc, minimum 3.5 A.

The MX3-CE DC power jack is located on the endcap.

The cradle power jack is located on the back of the cradle. The MX3-CE (and the Desktop Cradle) connect to any of the following power supplies through the DC Power Jack.

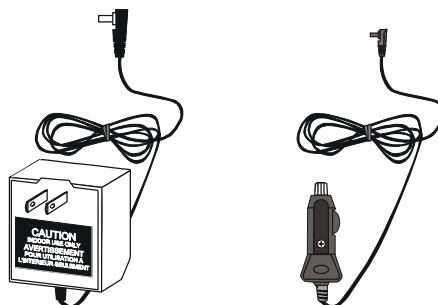


Figure 27 US AC/DC 12V Power Supply and Cigarette Lighter Adapter

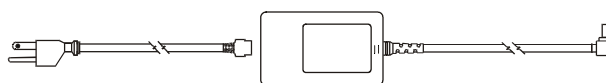


Figure 28 International AC/DC 12V Power Supply

Note: When the MX3-CE is receiving external power through a cradle, the cradle Status LED and the CHGR LED on the MX3-CE are illuminated.

Cradles

Note: The “MX3 Cradle Reference Guide” contains cradle installation and technical information.

There are two types of cradles: a desktop cradle for table top charging/communication applications and a vehicle mount cradle for vehicle mounted charging/communication applications.

The cradles give the MX3-CE the ability to communicate with a host computer and other equipment. In addition, using wall AC adapters or DC/DC converters, the cradle transfers power to the internal charging circuitry of the MX3-CE and, in turn, the MX3-CE recharges the Main Battery.

The MX3-CE can be either on or in Suspend mode while in the cradle. The MX3-CE can be inserted and removed from the cradle with one hand.

Cables are available from LXE for connecting the cradle to a printer, a personal computer or a barcode printer. Tethered scanners (for RS-232 cradle connection) are also available from LXE.

Desktop Cradle

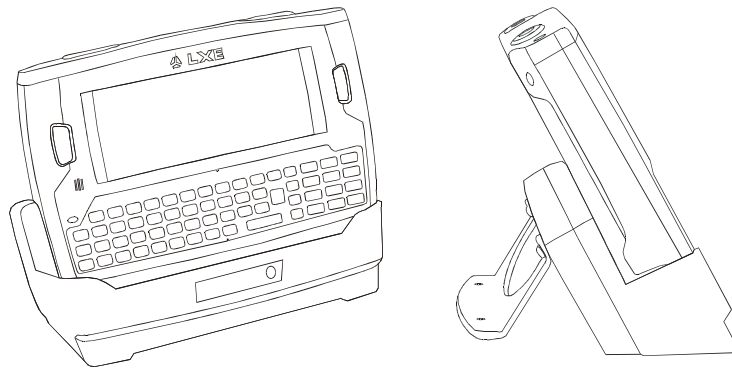


Figure 29 MX3-CE in the Desktop Cradle

How To:

Lower the MX3-CE straight into the cradle, tilt it forwards and then let it rest backwards into the cradle. Ensure that the MX3-CE is properly seated on the charging contacts. The CHGR LED will illuminate green when the MX3-CE is correctly seated in the cradle. The CHGR LED will illuminate red when the MX3-CE main battery is being charged (in a cradle connected to an external power source).

To remove the MX3-CE, tilt the MX3-CE forward and lift it straight up out of the cradle.

Note: Do not "slam" or slide the MX3-CE sideways into the cradle. Damage may result.

Status LED

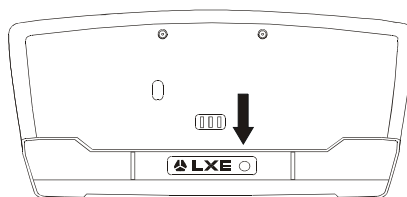


Figure 30 Desktop Cradle Status Indicator

An LED indicator shows the status of the cradle. When the indicator is not illuminated, there is no power applied to the cradle.

Cradle Power	Orange	Power applied to the cradle.
Docked	Green	Power applied to the cradle and connection made with the MX3-CE.
IR Active	Red	IR communication is active.

Power Connector

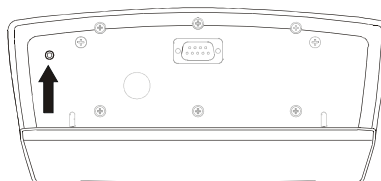


Figure 31 Desktop Cradle Power Connector

The Power connector is located on the back of the cradle. The cradle can be powered, if required, by an LXE US AC Adapter or an LXE International AC Adapter. When powered, the cradle transfers power to the internal charging circuitry of the MX3-CE allowing it to recharge the Main Battery. A powered cradle supports RS-232 and IR communications.

RS-232 Connector

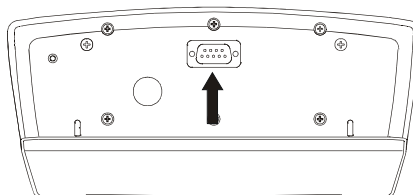


Figure 32 Desktop Cradle RS-232 Connector

The RS-232 connector is located on the back of the cradle. When the MX3-CE is properly docked, the bi-directional half-duplex transceivers in the MX3-CE and cradle are aligned through their IR

windows. The half-duplex IR signals from the MX3-CE are converted to RS-232 signals in the cradle and available at this connector.

Vehicle Mount Cradle

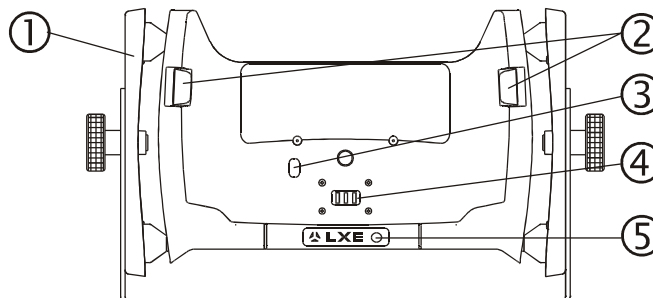


Figure 33 Vehicle Mount Cradle - Front

- 1 Vehicle Mount Bracket Assembly
- 2 MX3-CE Release Mechanism
- 3 IR Port
- 4 Battery Power Connection
- 5 Vehicle Cradle Status LED

This cradle is specifically designed for vehicle mount applications. The cradle restrains the MX3-CE and isolates the computer from shock and vibration. The MX3-CE is inserted into the cradle by placing the base of the unit in the pocket and then firmly pressing the unit backwards until the release mechanisms latch and hold the unit in the cradle. The MX3-CE is removed from the cradle by pressing the release mechanisms and pulling the MX3-CE up and away from the cradle.

Status LED

An LED indicator shows the status of the cradle. When the indicator is not illuminated, there is no external power source connected to the cradle.

Cradle Power	Orange	Power applied to the cradle.
Docked	Green	Power applied to the cradle and connection made with the MX3-CE.
IR Active	Red	IR communication active.

Power Connector

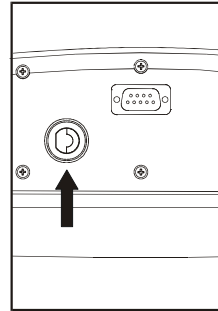


Figure 34 Vehicle Cradle Power Connector

The Power connector is located on the back of the cradle. The cradle is powered by either a vehicle's 12V battery or from an approved accessory for vehicles with higher voltage (24 to 60 VDC) batteries. When powered, the cradle transfers external power to the MX3-CE, which in turn, recharges the main battery. A powered cradle allows RS-232 and IR communication.

RS-232 Connector

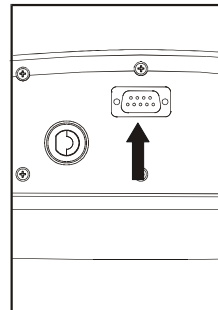


Figure 35 Vehicle Cradle RS-232 Connector

The RS-232 connector is located on the back of the cradle. When the MX3-CE is properly docked, the bi-directional half-duplex transceivers in the MX3-CE and cradle are aligned through their IR windows. The half-duplex IR signals from the MX3-CE are converted to RS-232 signals in the cradle and available at this connector.

Appendix A Key Maps

Keypad

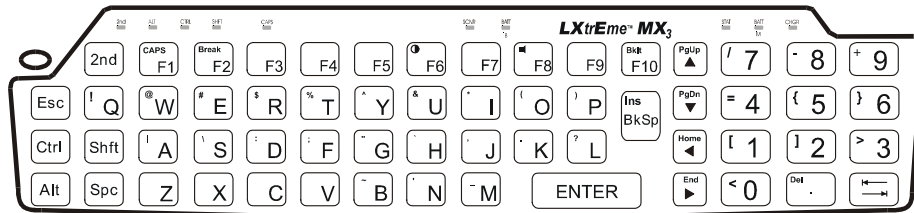


Figure 36 QWERTY Keypad

Key Map 101-Key Equivalencies

Note: This key mapping is used on hand held computers that are NOT running an LXE Terminal Emulator.

When using a sequence of keys that includes the 2nd key, press the 2nd key first then the rest of the key sequence.

Note: When the computer boots, the default condition of NumLock is On and the default condition of Caps (or CapsLock) is Off. The Caps (or CapsLock) condition can be toggled with a 2nd+F1 key sequence. The CAPS LED is illuminated when CapsLock is On.

To get this key	Press These Keys and Then					Press this key
	2 nd	Shift	Ctrl	Alt	CapsLock	
Contrast	✓					F6
Volume	✓					F8
Backlight	✓					F10
2 nd						2 nd
Shift						Shift
Alt						Alt
Ctrl						Ctrl
Scan ¹						Scan
Esc						Esc
Space						Spc
Enter						Enter
CapsLock (Toggle)	✓					F1
Back Space						BkSp

¹ Left Scan key default value is Scan. Right Scan key default value is Enter.

To get this key	Press These Keys and Then					Press this key
	2 nd	Shift	Ctrl	Alt	CapsLock	
Tab						Tab
BackTab	✓					Tab
Break	✓					F2
Pause	✓	✓				F3
Up Arrow						Up Arrow
Down Arrow						Down Arrow
Right Arrow						Right Arrow
Left Arrow						Left Arrow
Insert	✓					BkSp
Delete	✓					DOT
Home	✓					Left Arrow
End	✓					Right Arrow
Page Up	✓					Up Arrow
Page Down	✓					Down Arrow
Right Shift	✓	✓				F7
Right Alt	✓	✓				F8
Right Ctrl	✓	✓				F9
ScrollLock	✓	✓				F4
F1						F1
F2						F2
F3						F3
F4						F4
F5						F5
F6						F6
F7						F7
F8						F8
F9						F9
F10						F10
F11	✓	✓				F1
F12	✓	✓				F2
a		✓				A
b		✓				B
c		✓				C
d		✓				D
e		✓				E
f		✓				F

To get this key	Press These Keys and Then					Press this key
	2 nd	Shift	Ctrl	Alt	CapsLock	
g		✓				G
h		✓				H
i		✓				I
j		✓				J
k		✓				K
l		✓				L
m		✓				M
n		✓				N
o		✓				O
p		✓				P
q		✓				Q
r		✓				R
s		✓				S
t		✓				T
u		✓				U
v		✓				V
w		✓				W
x		✓				X
y		✓				Y
z		✓				Z
A					✓	A
B					✓	B
C					✓	C
D					✓	D
E					✓	E
F					✓	F
G					✓	G
H					✓	H
I					✓	I
J					✓	J
K					✓	K
L					✓	L
M					✓	M
N					✓	N
O					✓	O
P					✓	P

To get this key	Press These Keys and Then					Press this key
	2 nd	Shift	Ctrl	Alt	CapsLock	
Q					✓	Q
R					✓	R
S					✓	S
T					✓	T
U					✓	U
V					✓	V
W					✓	W
X					✓	X
Y					✓	Y
Z					✓	Z
1						1
2						2
3						3
4						4
5						5
6						6
7						7
8						8
9						9
0						0
DOT						DOT
<	✓					0
[✓					1
]	✓					2
>	✓					3
=	✓					4
{	✓					5
}	✓					6
/	✓					7
-	✓					8
+	✓					9
*	✓					I
: (colon)	✓					D
; (semicolon)	✓					F
?	✓					L
`	✓					N

To get this key	Press These Keys and Then					Press this key
	2 nd	Shift	Ctrl	Alt	CapsLock	
_ (underscore)	✓					M
, (comma)	✓					J
' (apostrophe)	✓					H
~ (tilde)	✓					B
\	✓					S
	✓					A
“	✓					G
!	✓					Q
@	✓					W
#	✓					E
\$	✓					R
%	✓					T
^	✓					Y
&	✓					U
(✓					O
)	✓					P



Appendix B Contacting LXE

Contacting LXE

All LXE manuals are now available on one CD and they can also be viewed/downloaded from the LXE ServicePass website. Contact your LXE representative to obtain the LXE Manuals CD.

You can also get help from LXE by calling the telephone numbers listed on the LXE Manuals CD, in the file titled "Contacting LXE". This information is also available on the LXE website www.lxe.com.

Explanations of terms and acronyms used in this manual are located in the file titled "Glossary" on the LXE Manuals CD.

Manuals and Accessories

Manuals

MX3-CE Reference Guide
MX3 Cradle Reference Guide

Accessories

Tethered Scanners

Scanner, LS3203, Ext. Range, 8' Cbl, US.	8011LS3203ERC08DUS
Scanner, LS3203, Ext. Range, 8' Cbl, EC.	8011LS3203ERC08DEC
Scanner, LS3203, Ext. Range, 20' Cbl, US	8011LS3203ERC08DUS
Scanner, 530092IP, 7' Cbl, WW.	8110IP530092C07DWW
Scanner, 530092IP, 15' Cbl, US.	8110IP530092C15DUS
Scanner, P302FZY, 8' Cbl, WW	8200A326SCNRP3028DA9F
Scanner, P302FZY, 20' Cbl, US	8200A327SCNRP30220DA9F
Scanner, P304PRO, 8' Cbl, WW	8210A326SCNRP3048DA9F
Scanner, P304PRO, 8' Cbl, US	8210A327SCNRP30420DA9F
Scanner, Powerscan SR, 8' Cbl, WW	8300A326SCNRPWRSR8DA9F
Scanner, Powerscan SR, 12' Cbl, US	8300A327SCNRPWRSR12DA9F
Scanner, Powerscan LR, 8' Cbl, WW	8310A326SCNRPWRLR8DA9F
Scanner, Powerscan LR, 12' Cbl, US	8310A327SCNRPWRLR12DA9F
Scanner, Powerscan XLR, 8' Cbl, WW	8320A326SCNRPWRXLR8DA9F
Scanner, Powerscan XLR, 12' Cbl, US	8320A327SCNRPWRXLR12DA9F

PCMCIA Cards

Standard Compact Flash Card, 1Gig HD	9000A254HDDCF1GB
PCMCIA Compact Flash Adapter	9000A106PCCCFADPTR

Holding Accessories

Strap, Hand, Nylon	2381A407HANDSTRAP
Nylon Holster for use with Belt	2381A401HOLSTER

Nylon Hip Flip
 Nylon Case with Shoulder Strap
 Stand, Scanner For 5300IP Series, Tethered
 Bracket, Mounting LS300
 Holster, Hood, Nylon, 5300IP Series, Tethered

2381A403HIPFLIP
 2381A402CASE1
 8100A001STAND
 8010A001BRKT
 8100A401HLSTRHOOD

Miscellaneous

Pen, Stylus, Black, 2330
 Headset with microphone

9000A501PASSIVEPEN
 9000A503HEADSET

Battery Chargers and Battery

6 Unit Charger
 Battery, Li-Ion

2381A377CHGR6
 2381A376BATT1600

Cradles and Power Supplies

Desktop Cradle²
 Vehicle Mount Cradle³
 Power Supply, Vehicle Cradle, 9-30VDC
 Power Supply, Vehicle Cradle, 30-80VDC
 AC Power Supply, External, US
 AC Power Supply, External, AC, International
 Power Cord, AC, US
 P/S, External, Cigarette Lighter Adapter
 Power Adapter, Bare Wire 12 VDC
 Power Adapter, 24-72 VDC, 20 Watts
 Power Adapter, 110-240 VAC

2381A001DESKCRADLE
 2381A003VMCRADLE
 2381A054CRDLDCPWR30V
 2381A055CRDLDCPWR80V
 2335A301PSACUS
 2335A302PSACWW
 9000A066CBLPWRAC
 2335A303PSCIGLTADPT
 1300A053CBL12ML3
 1300A301PS24WW
 1300A303PSACWW

Cables for Cradle and MX3-CE Serial Ports

Cable, PC, DA-9F to DA-9F, 6 ft.
 USB Slave to DA-9 Interface Cable

9000A054CBL6D9D9
 9000A067CBL52USB

² Power Adapter Required.

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